Governor's Drought Task Force

Potable Water Plan

July 10, 2003

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Executive Summary

The Potable Water Plan is a result of the leadership provided by Governor Napolitano through Executive Order 2003-12. The Executive Order created the Governor's Drought Task Force to develop a long-term drought plan, a statewide water conservation strategy and to address short-term water needs.

The Potable Water Plan addresses short-term water supply for political subdivisions under emergency conditions where the health and welfare of the public is at risk. The Plan introduces a methodology based on planning guidance from the National Drought Mitigation Center. There are three basic elements to the Plan: Monitoring, Assessment and Response. Each section describes specific mechanisms to provide data, determine potable water drought related risk factors, and provide response guidance to political subdivisions of the State. The Monitoring function identifies a web site where the latest climate discussion is updated, as new information is available. The Assessment discussion identifies water providers that face potable water delivery challenges due to drought and provides a vulnerability profile. The profile enables rural water providers (where nearly all of the potable water shortage risk is associated) to determine their own risk to drought as conditions change. The Response discussion directs at risk water providers to the appropriate response mechanism and encourages early preparedness to mitigate drought impacts. The Plan borrows a concept from the fire fighting community, Incident Command System, where the organizational structure can scale itself to meet operational demands. The Plan identifies triggers to mobilize teams to accomplish objectives in each of the functional areas.

Annexes to the plan provide additional information on drought severity and impacts, guidance to water users from the Department of Health, maps of impacted areas prepared by the Arizona Department of Environmental Quality and response documents from the Arizona Division of Emergency Management. There is also an Annex for the emergency groundwater transportation permit authorized by House Bill 2478. This new law became effective on May 21st, 2003 and remains in effect until April 30th, 2004.

A web link to the Plan is available on the Arizona Department of Water Resources web site. The web address is http://www.water.az.gov/gdtf/

Background:

Governor Napolitano signed Executive Order 2003-12 on March 20th 2003 that created a drought task force. The Governor's Drought Task Force (GDTF) was charged with developing a drought plan for the State, a statewide conservation strategy and a plan to address short-term water supply issues for the immediate future. The Governor's Executive Order stated that precipitation throughout the State of Arizona during the past four years and for six of the last seven years has been significantly below normal. The lack of precipitation has significantly reduced stream flows in the interior basins and has reduced surface and groundwater supplies upon which citizens and the commerce of the State are dependent. The drought conditions affect areas throughout the State but most critically in the rural areas. The Executive Order recognized that the current drought conditions directly endanger people, property, crops, livestock, and wildlife throughout the State. In addition, economic hardship caused by drought has an impact on commerce throughout Arizona. However, actions can be taken to mitigate the effects of drought even though droughts periodically reoccur across Arizona and are a natural climatic feature of the southwest. The adverse impacts can be mitigated through proper coordination of many activities such as planning and conservation measures.

The Governor's Executive Order designated the Arizona Department of Water Resources to lead the coordination of activities of State agencies. However, the development of the long-term drought plan will include participation of all interested parties, including Native American Tribes, political subdivisions, water providers, agriculture interests, non-governmental organizations and others. The Arizona Department of Water Resources responded to the Executive Order by implementing discussions to meet the short-term water supply needs first. One of the first products of the task force is the Potable Water Plan.

Potable water needs of the State received a high priority due to the increased health risks associated with lack of potable water for daily human needs. Therefore, the Task Force is committed to developing a Potable Water Plan that provides assistance where public health and welfare is affected by potable water shortages. The Plan identifies water companies or providers that may have difficulty meeting their potable water demands this year. The Plan also identifies locations in the State where drought-related water level declines are causing, or are likely to cause, significant losses of supply for individual domestic wells.

Introduction:

Precipitation throughout Arizona has been significantly below normal during the past four years and for six of the last seven years. The lack of precipitation in the form of snow in the higher elevations has significantly reduced stream flows in the State's interior basins. Below average snowmelt has reduced or eliminated surface water sources and forced an increasing dependency on groundwater. Water supplies upon which citizens and commerce are dependent are in jeopardy of being depleted to the point of having an impact on the health and welfare of the citizens of the State. This is especially true in rural Arizona, which depends on groundwater supplies for most of its water needs. The potable water plan is focused on supporting rural areas of the State where there are few resources to mitigate the effects of drought.

Municipal water providers such as in the Tucson and Phoenix metropolitan areas have developed a variety of measures over the last twenty years to mitigate the effects of drought. Large water providers in these areas have already implemented drought response measures such as planning, water banking, and public education programs to encourage conservation.

The plan outlines a process that individuals, water providers, and political subdivisions can use to reduce the impact of potable water shortage due to drought. The importance of monitoring drought conditions to determine the risk associated with decreased water supply is explained. A risk assessment model is described and water system vulnerabilities are listed. Water providers and political subdivisions can compare water system vulnerabilities to their own areas of concern and evaluate their risk to drought. Response mechanisms are discussed to enable political subdivisions to prepare for potable water shortages. Preparedness activities could include local water curtailment planning, familiarization with current response programs and identifying, in advance, operational mechanisms to transport water.

Specific response operations to transport potable water are discussed in the State Emergency Response Incident Action Plan attached as an Annex to this plan.

Climate Synopsis

The current drought in Arizona is likely to continue into next year. Arizona did receive some drought relief through rain and snow in the fall and winter, following a fairly weak monsoon season last summer, but overall the drought picture is only slightly improved.

Several years of low winter rainfall and snow have resulted in very low reservoir levels. Arizona experienced a near normal snow-pack over the late winter and early spring that reflected a dramatic increase over the same period last year. A recent USGS report, *"Water Resources Data Arizona Water Year 2002, Water Data Report AZ-02-1"*, noted that yearly discharge at five key stream flow gauging stations ranged from 29 to 57% of the median of yearly discharges.

The wildland fire season could still be very severe as it was in 2002. The fire danger outlook for the coming months predicts to be normal to above normal severity. The 1000-hour fuel moistures dropped significantly through January reaching critical levels for that time of year. However, as precipitation fell throughout the area during February and March, 1000-hour fuel moistures started showing signs of rebounding, bringing heavier fuel moisture levels back to within their normal range of 16-20 percent.

Bark beetles have and continue to increase the fire hazard potential. These insect pests not only cause severe economic damage due to destruction of timber, but the dead trees dramatically increase the potential for destructive wild-land fires. During the past two years,

over 800,000 acres of Arizona's forests have been killed by these very destructive forest pests in the ponderosa pine and pinyon-juniper forests. Low tree vigor caused by several years of drought and excessively dense tree stands have combined to allow beetle populations to reach outbreak levels, about a seven-fold increase in acreage since 2001. Vulnerability to fire in Arizona's forests is likely to continue for several years as a result of the drought and there appears to be little relief in the long-range forecast. The most severe risk areas are in communities in the wildland interface where there is a shared boundary with dead trees due to bark beetle mortality. Communities that are vulnerable to wildland fire have an increased risk if a potable water shortage compromises fire fighting capability.

Drought conditions are likely to continue through next winter. Recent predictions are for the return of the La Nina in the southern Pacific Ocean. La Nina is closely associated with a cool dry winter period for Arizona. If the cool and dry winter forecast does occur next year the dangerous water supply conditions that exist in some parts of the State will be aggravated.

Objectives:

The potable water plan has several broad objectives. The first objective is to monitor climatic data and make them available to policy makers to assist in long-range decisions. Appropriate long-range decisions can mitigate the effects of drought on potable water usage in a number of ways. Proactive adoption of water conservation measures may allow water providers to meet demand during periods of limited drinking water availability.

Drought monitoring is important because the analysis of climate data is simplified from a complex set of data into a discussion that provides a wide audience with the information that is most useful for them. The drought discussion focuses on intensity, duration, and geographic scope. It also provides a historical reference to assist in response planning and design applications.

A second objective is to create a potable water provider assessment process to collect a list of water providers that have had historical water supply problems and determine the extent of the water delivery problems that may materialize this summer. Depending on the type of water provider, there are a number of state agencies and at least one federal agency that provides regulatory oversight or technical assistance. The initial potable water assessment included the state agencies listed below. A list of water providers (municipal and private companies) was collected from each agency and evaluated using the combined staff experience of the state agencies to determine if any water supply shortages were likely for this summer.

The Arizona Department of Environmental Quality (ADEQ) provides regulatory oversight to protect water quality in Arizona. ADEQ provided a list of communities that have experienced water delivery problems in the past.

The Arizona Corporation Commission (ACC) provides additional regulatory oversight for privately owned providers and public service corporations. A public service corporation is any water provider entity other than a municipality, which furnishes water to the public for any purpose. These entities may include, but are not limited to, corporations, partnerships, individuals, cooperatives, homeowners associations, and others. The ACC provided a list of water providers that currently have curtailment tariff plans. Having a curtailment tariff plan does not automatically imply that the water provider has a vulnerability to drought related water shortage.

The Arizona Division of Emergency Management (ADEM) coordinates response to emergencies within the State. The ADEM provided a list of water providers that have historically applied for disaster assistance due to potable water shortages.

The Arizona Department of Water Resources (ADWR) currently has an internal process to collect information from private well owners that have notified the agency that their well requires deepening or if a request is filed for authorization to drill a new well due to water level changes. Private wells are reviewed and approved by local health officials to determine proper setbacks for septic tanks, and the Arizona Department of Water Resources permits the actual well drilling.

The U.S. Environmental Protection Agency also provides assistance to certain tribal water providers within Arizona, however some Indian Nations manage and regulate their own providers.

The third objective of the Plan is to develop response options that minimize the impact of potable water shortages. Although the first objective will provide water providers and policy makers with significant lead-time to allow conservation measures to be implemented, the chance of completely mitigating all water shortages through conservation measures is slight. Many parts of rural Arizona are already hauling water either out of necessity or by choice. These water users are conserving water at a remarkable level, sometimes using as little as 10 gallons per day per person (*Navajo Nation Drought Contingency Plan, 2002*). Water conservation in some communities will have little impact on total demand. Drought-related water supply shortages in these and other communities that have implemented conservation strategies might require finding new water sources either on a temporary or permanent basis. The State Emergency Response and Recovery Plan and other federal programs may be invoked to provide water either through hauling or development of other water sources.

The Governor's Executive Order also directed the development of triggers to determine when specific conditions warrant response actions. Each functional area described below identifies a trigger that indicates a reaction to a set of drought conditions. The size and scope of the potable water organizational structure is dependant on conditions of severity. Drought monitoring is a continuous activity that is reported monthly regardless of the severity of the drought. However, the detail of the drought monitor report could vary depending on severity. The assessment group activities are invoked when conditions of drought reach a threshold that warrant ongoing vulnerability assessment of water systems. Given the severity of the drought and the likelihood of the drought continuing, assessment of potable water should be continuous until conditions improve or the individual vulnerabilities are reduced through mitigation actions. Response systems need to be planned for to ensure a rapid operational capability.

The Plan also borrows a concept from the successful model developed from the fire fighting community's Incident Command System. As the severity of an event changes and the operational needs change, the response organization adapts to meet the needs of the incident. Adapting the response structure to fit the severity of the drought requires frequent evaluation of the drought and its impacts. Monitoring is an essential element of this evaluation. As drought conditions continue, monitoring activities should continue as well until conditions improve. Assessment and response operations could revert to maintenance level if drought conditions improve. However, it is more likely that the drought will maintain its hold on Arizona and the assessment and response activities should continue to be developed. Expanding and contracting the potable water drought plan organization to match the operational requirements reduces staff time and taxpayer expense.

Key Functional Areas

Monitoring:

Monitor Team members may include, National Weather Service, Arizona Division of Emergency Management, Arizona Department of Water Resources, Salt River Project, the University of Arizona, the State Climatologist at Arizona State University and others.

A national drought monitoring capability already exists and there are several other drought indicators that can provide significant insight to current conditions. Other climate indices in the form of long-term prediction maps are available from a variety of sources, both government and institutional. They provide additional data and discussion forums that relate to monitoring climate conditions. There are significant resources within the state that support the climate assessment and projection process. The University of Arizona has a project funded by the National Oceanic and Atmospheric Administration (NOAA) to assess the impacts of climate variability on human and natural systems. The project, Climate Assessment of the Southwest (CLIMAS), produces a monthly report *EndInsight* that discusses the drought and its impacts. The Arizona Division of Emergency Management is a partner in the CLIMAS project and produces an Arizona specific drought monitor discussion monthly. The report is an analysis of climate and weather information that is collected from some of the available sources. Data is collected from the National Weather Service, National Drought Mitigation Center, and the Southwest Fire Center. Improvement in the report will be made through the integration of data that's currently not available on a regular basis.

National Drought Monitor Report is available weekly and the current State report is distributed monthly. Distribution of the report will be made to a broader audience and also made available on the Governor's Drought Task Force (GDTF) web site. Climate data by its nature is slow to change; therefore, monthly reporting is adequate. However, as national products such as the National Drought Monitor and discussion are made available, the GDTF web site will be updated. The web site is located at http://www.water.az.gov/gdtf/

Assessment:

Risk is defined as a function of the frequency and severity of the event, in this case drought, and vulnerability. For the purposes of the short-term Potable Water Plan it was assumed that the frequency of the drought was equal statewide. The vulnerability analysis was conducted by collecting names of water providers that have historical occurrences of water shortages. The list of water providers was collated from each agency list discussed in the Objectives Section.

The first data source includes information collected by and from senior state staff with long-term experience in water supply, regulation, and quality oversight. Representatives from the Arizona Corporation Commission, Arizona Department of Water Resources, Arizona Department of Environmental Quality, Arizona Department of Health Services, and the Arizona Division of Emergency Management submitted names of water providers for analysis. Each state agency prepared a list of providers that either have historical supply issues or met another qualifying condition such as application for curtailment tariffs. Once the list was developed contact was made by the Arizona Department of Water Resources with each entity to determine the extent and nature if any of their water supply problems.

Municipally Owned Water Providers

There are no municipally owned water providers currently experiencing water supply shortfalls although several rural water providers have reported areas of concern.

As noted earlier the large metropolitan areas of the state are resistant to potable water shortages due to planning, a well developed integrated infrastructure across large basin areas and effective water conservation media campaigns.

The Arizona Department of Environmental Quality provided the map locations of rural water systems that may be affected by drought and depicts the closest potential water supply sources. The ADEQ maps are listed in an annex to this plan.

Water Companies With Current Water Supply Problems

Four private water companies report difficulty meeting their current water needs:

- Sonoita Valley, Sonoita -- This company is having difficulty meeting daily demand without trucking water. The company is currently hauling water for 35 customers at a cost of $100 to $150 per truck. Integrating the system with an adjacent water provider would resolve the problem.
- Bella Vista South, unincorporated area south of Sierra Vista -- This company is having difficulty meeting daily demand but believes that more proactive water conservation would have a beneficial impact. Declining water levels, increased peak demand and reduced availability of water supply are the principal reasons for concern.
- Pine Water Company, Pine -- The company is having difficulty meeting peak demand especially during long holiday weekends. Water hauling to meet peak demand and a more focused water conservation strategy are possible solutions.
- Hunt Water Company, Strawberry -- Like Pine Water Company, peak demand is an issue and a more focused water conservation strategy combined with emergency water hauling will provide sufficient water in the short term.

Water Providers With Potential Water Supply Problems This Summer

Beaver Valley Water	Drought related
Mt. Lemmon	Drought related
Strawberry Water	Drought related
Mayer	Drought related, peaking and infrastructure
United Utilities/East Verde	Drought related
Walden Meadows	Infrastructure related, dependent on power
Navajo Depot	Hauled water last year
Chloride	Water quantity and quality
Dolan Springs	Drought related

The second data source is the analysis of responses to a rural water provider survey recently conducted by the Arizona Department of Water Resources. Three separate surveys were distributed throughout the State. One survey was sent to 500 water providers, the second survey instrument was sent to cities and towns, and the third was sent to Counties and Tribes. To date 19 surveys were returned to the Arizona Department of Water Resources from the political subdivisions and 121 water providers have responded. Three questions in the surveys were relevant to the potable water vulnerability analysis. The combined analysis of the

questions represents a comprehensive list of underlying causes for water shortages and therefore is representative of water shortage vulnerabilities. An additional question asked if the water provider hauled water last year in response to water shortage.

The vulnerability criteria were developed from the analysis of the surveys of water providers and jurisdictions and includes the following:

Peak demand exceeds supply
Inadequate storage to meet peak demand
Inadequate pumping capacity to meet peak demand
Inadequate storage to meet long-term demand
Undersized distribution system
Inadequate water production
Infrastructure related problems/system failure
Insufficient water supply (source)
Inability to meet water quality standards

The following is an analysis of the available data as of June 17th, 2003:

Water Providers

Just over a fifth of the respondents (26) reported that the drought has had an impact on their water supply. The balance of the responses (95) indicated that they do expect to have challenges consistent with one or more of the areas of vulnerability. The most common reported vulnerability was the declining ground water levels (24), and increased peak demand (17) among water providers. Currently there are at least two water providers that reported hauling water, although four reported that hauling water is a normal part of their operation.

Political Subdivisions

The political subdivisions (19 reported) were asked if the drought had an effect on their water supply. Seven political jurisdictions reported that drought did effect their operation. The most common reason cited was reduced supply (5) and lower groundwater tables (5) followed by increased demand for potable water (4).

Individual Wells: Reported areas of concern

Small capacity domestic wells are often vulnerable to the effects of drought. In many areas of the state there are large numbers of densely located domestic wells that produce marginal volumes of water from cracks or fissures in hard rock formations. When droughts occur, the natural recharge to aquifers diminishes and water levels decline. This situation can be particularly problematic for shallow wells because water production can drop off to unacceptable levels, or wells can go completely dry. The Arizona Department of Water Resources is currently monitoring public contacts concerning water well and water supply problems that may be related to the Southwest's ongoing multi-year drought. Between April 17th and May 23rd the Department has received several reports from well owners and/or well drillers of domestic wells losing production capacity or going dry in several parts of the state.

There is some difficulty in clearly distinguishing between domestic well problems that are solely caused by the drought and problems that may be related to the impacts of other nearby wells. Wells that were reported to have gone dry in the Prescott area ranged from about 240 to 300 feet in depth and were located in hard rock areas with comparatively high densities of nearby wells. Other wells that were reported to have gone dry are located in the central part of the state near Apache Junction and Florence. Depths for these wells range from 220 to 310 feet. The impact of drought and the competition of nearby wells are potential causes of these well

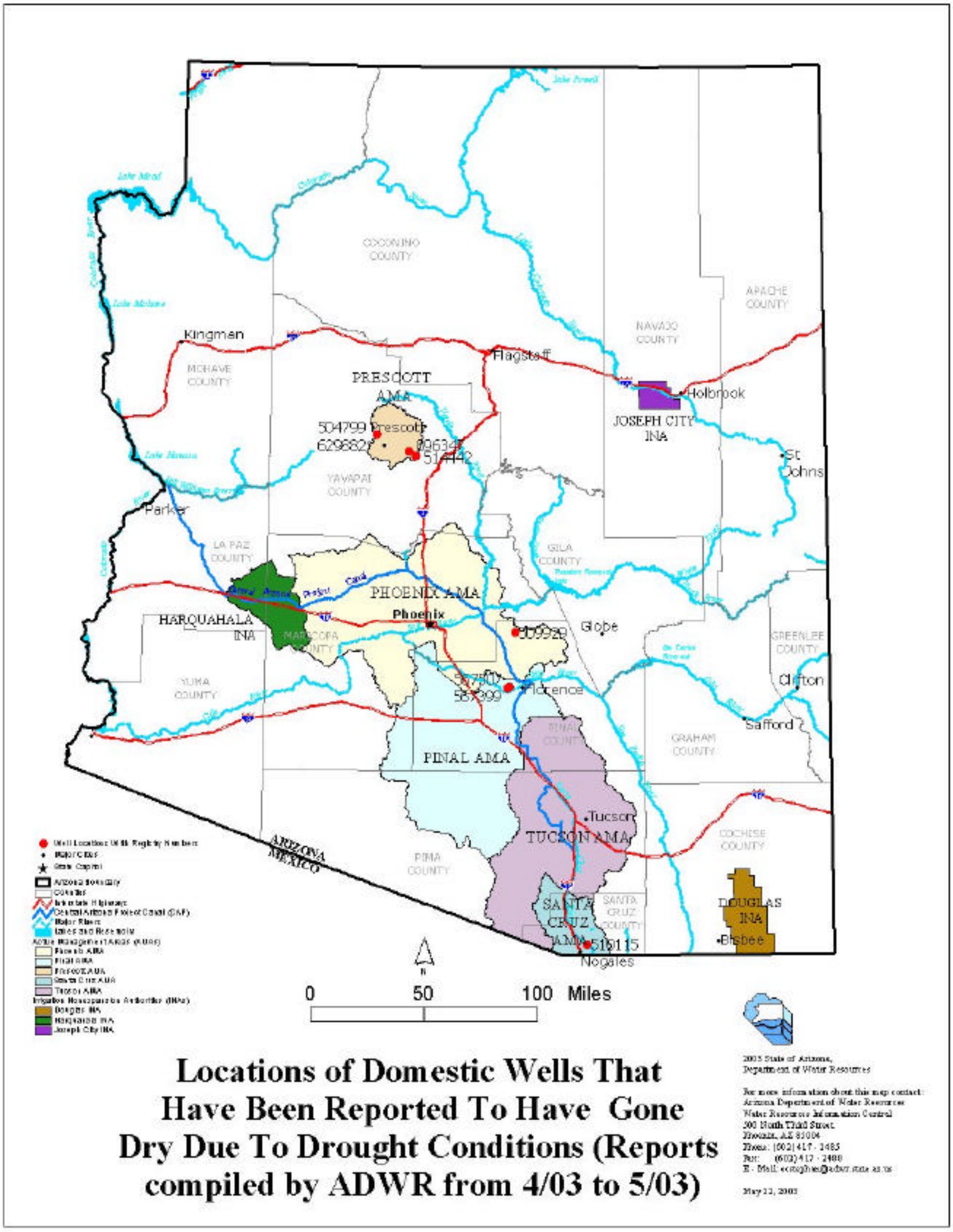
problems. A shallow 40-foot well was reported to have gone dry along the Santa Cruz River near Nogales. The failure of this well is undoubtedly attributable to the lack of stream flow and recharge that often occurs during the summer months along that reach of the Santa Cruz River. Applications have been filed to replace or deepen many of the wells mentioned.

The ADWR anticipates there may be many more reports of drought-related domestic well problems as the summer season progresses. These reports will be monitored and analyzed along with available water level data to help the Department identify other vulnerable areas of the state where drought-related water level declines are likely to cause significant losses of supply for individual domestic wells. This analysis will help form the basis for both short-term relief efforts and long-term plans and strategies to deal with this important concern.

The map on page 13 depicts the domestic wells that have been reported to have gone dry since the end of May 2003.

Trigger

The potable water providers identified as being previously reported or have potential vulnerabilities should be routinely assessed throughout the summer to anticipate any response actions that may be necessary. The Arizona Department of Water Resources, Arizona Corporation Commission, Arizona Department of Environmental Quality, Arizona Department of Health Services and the Arizona Division of Emergency Management will meet on a regular basis to share assessment data and evaluate any other water providers that have the potential to experience water shortages. The Arizona Department of Water Resources staff has established routine contact with the water providers that are currently experiencing water delivery challenges to provide a constant assessment profile.


Kingman
Flagstaff
Holbrook
PRESCOTT AMA
JOSEPH CITY INA
St Johns
Parker
PHOENIX AMA
Phoenix
HARQUAHALA INA
Globe
Florence
Clifton
Safford
PINAL AMA
Tucson
TUCSON AMA
SANTA CRUZ AMA
Nogales
DOUGLAS INA
Bisbee
COCONINO COUNTY
MOHAVE COUNTY
NAVAJO COUNTY
APACHE COUNTY
YAVAPAI COUNTY
LA PAZ COUNTY
GILA COUNTY
GREENLEE COUNTY
YUMA COUNTY
GRAHAM COUNTY
COCHISE COUNTY
PIMA COUNTY
SANTA CRUZ COUNTY
ARIZONA
MEXICO
0 50 100 Miles
Locations of Domestic Wells That Have Been Reported To Have Gone Dry Due To Drought Conditions (Reports compiled by ADWR from 4/03 to 5/03)
2003 State of Arizona, Department of Water Resources
May 23, 2003

Response:

Response to a potable water emergency should include a concentrated effort to reduce the demand for potable water through conservation measures. The Arizona Corporation Commission has a curtailment plan format that has been used for a number of private water companies that describes specific actions that might mitigate the effects of the shortage that can be taken in advance of an emergency. However, conservation measures may not be successful if water use is already limited to essential uses or the water supply is a fraction of the volume needed. In some cases, drought related potable water shortages might only be alleviated through the augmentation of the water supply, generally through transfer or hauling water.

Prior to hauling water, regulatory considerations should be considered. The Arizona Corporation Commission requires a notification process for private water companies that are under their jurisdiction. In addition, the state Groundwater Code prohibits most transfers of groundwater from basin to basin. However, the Governor signed legislation this year (HB 2478) that authorizes the Director of the Department of Water Resources to approve temporary inter-basin transfer of groundwater outside the Active Management Areas under certain conditions. The legislation expires on April 30th 2004. The Arizona Department of Water Resources has developed a drought emergency groundwater transportation permit application process. The permit application process is provided in an annex to this plan.

The State's surface water laws protect the use of surface water. A surface water claim or right authorizing the use of the water at the location is requirement of either State or Federal law.

Where conditions result in a lack of potable water either due to infrastructure failure or drought related water supply limitations, response actions can be taken to assist political subdivisions. Where the health or welfare or the citizens of the State is a concern, the Governor has the authority to declare an emergency that authorizes the State Emergency Response and Recovery Plan to be invoked. Under the State plan, political subdivisions are eligible for reimbursement of 75% of their costs to haul water. Jurisdictions that seek to use this authority should contact their local emergency manager or contact the Arizona Division of Emergency Management for guidance. An Annex to this plan includes a checklist for local jurisdictions that may require assistance.

Political subdivisions that anticipate needing assistance based on risk assessments against the vulnerability profile should contact their county emergency response program coordinator to begin to identify operational needs.

The Arizona Division of Emergency Management will notify the State assessment team to enable each State agency with specific responsibilities in the State Emergency Response and Recovery Plan and the Potable Water Incident Annex to complete assignments. Early assessment and frequent communication with drought affected political subdivisions is strongly encouraged.

Annex: Governor's Executive Order
Annex: Current Arizona Drought Discussion
Annex: State Emergency Response Incident Action Plan
Annex: Arizona Department of Health Services: Drought Information Sheets

Annex: Drought Emergency Groundwater Transportation Permit Application

Annex: Governor’s Executive Order

EXECUTIVE ORDER 2003-12

ARIZONA DROUGHT TASK FORCE PLAN

WHEREAS, precipitation throughout the State of Arizona during the past four years and for six of the last seven years has been significantly below normal; and

WHEREAS, the lack of precipitation has significantly reduced stream flows in the State's interior basins and reduced surface and groundwater supplies upon which citizens and the commerce of the State are dependent; and

WHEREAS, the lack of precipitation has created drought conditions throughout the state and most critically in the rural areas of the State; and

WHEREAS, the drought endangers people, property, crops, livestock and wildlife throughout the State of Arizona; and

WHEREAS, droughts are a periodically reoccurring event in Arizona and the arid southwest; and

WHEREAS, the adverse impacts of the drought can be mitigated by proper coordination of activities;

NOW, THEREFORE, I, Janet Napolitano, Governor of the State of Arizona, by virtue of the authority vested in me by the Constitution and Laws of the State, do hereby order the creation of a Drought Task Force, and further order as follows:

1. Under the leadership of the Department of Water Resources, the Drought Task Force shall:

    A. Identify water companies/providers that will have difficulty meeting their potable water demands this year.

    B. Identify locations in the state where drought-related water level declines are causing, or are likely to cause, significant losses of supply for individual domestic wells.

C. Identify areas in state where water availability has declined and there will be insufficient water to sustain agricultural operations including crops and livestock.

D. Identify locations in state where reduced water availability is impacting wildlife and wildlife habitat.

E. Develop and implement short-term drought plans to respond to and mitigate water shortages identified in items A through E above.

F. Develop and implement long-term drought mitigation plans for the state including thresholds for declaring a state of emergency and/or asking for the declaration of a federal disaster.

G. Develop and implement a statewide water conservation education strategy that emphasizes educational advertising for good water habit development.

H. Evaluate opportunities for more efficient use of water to meet agricultural and municipal needs.

I. Evaluate the availability of water for wildfire suppression and develop a plan for alternative supplies.

J. Assume the lead role in intergovernmental drought response coordination and media information releases, which shall be coordinated through and released by the Governor's Office.

K. Provide guidance and information to the Governor should conditions constitute the declaration of an emergency.

2. The Drought Task Force shall consist of one member selected by the Governor from each of the following agencies or entities:

A. Office of the Governor
B. Arizona Corporation Commission
C. Arizona Department of Agriculture
D. Arizona Department of Commerce
E. Arizona Department of Environmental Quality
F. Arizona Department of Health Services
G. Arizona Department of Real Estate
H. Arizona Department of Water Resources

I. Arizona Division of Emergency Management
J. Arizona State Land Department
K. Arizona Department of Homeland Security
L. Arizona Department of Transportation
M. Arizona Game and Fish Department
N. Arizona House of Representatives
O. Arizona State Senate

In addition, representatives from Arizona Counties, Cities, Towns and Indian Tribes and representatives from all water and power utilities in the state will be invited to participate. Federal agencies with drought response and recovery programs may be asked to act as advisors to the Task Force. All meetings shall be open to the public and the public will be encouraged to attend.

3. The Task Force may create work groups to address specific problem areas and shall create the following specific work groups:

   A. **Municipal and Industrial Water Supply** - This group shall make assessments and develop mitigation strategies including opportunities to increase water use efficiency for drought related impacts on public water supply systems (including both public and private water companies), exempt wells, and public health conditions.

   B. **Agriculture -** This group shall make assessments and develop mitigation strategies including opportunities to increase water use efficiency for drought related impacts on agriculture including crops and livestock.

   C. **Wildlife and Wildlife Habitat** - This group shall make assessments and develop mitigation strategies for drought-related impacts on Arizona's wildlife and wildlife habitat.

   D. **Conservation Education** - This group shall design an educational advertising plan for use in water conservation education throughout the state, but focused on rural areas. It shall also assess available, no-cost public interest media opportunities to convey plan messages as well as identify potential contributors for additional paid media spots.

   E. **Fire Suppression** - This group will make assessments of existing water supplies available and develop a plan for alternative water supply options for suppression of wildfire.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Arizona.

GOVERNOR

Done at the Capitol in Phoenix this 20th day of March in the Year Two Thousand Three and of the Independence of the United States of America the Two Hundred and Twenty-Seventh

ATTEST:

SECRETARY OF STATE

Annex: Drought Discussion

Arizona Drought 2003

Arizona Division of Emergency Management
1 April 2003

Drought Continues, Despite Near-Normal Winter Rains

Drought and Wildland Fire Concern Continues

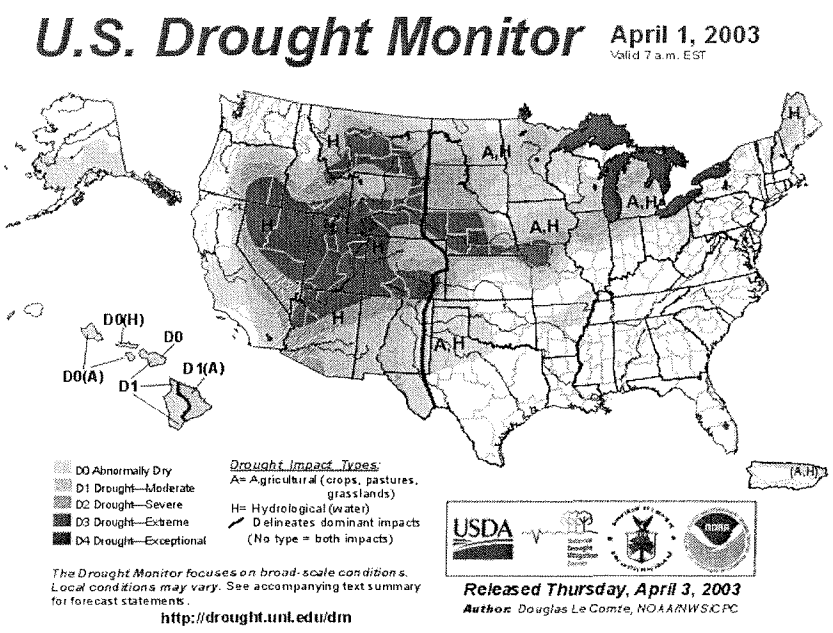
The current drought in Arizona is not over, and will probably not be over by next year. We have gotten some relief from rain and snow in the fall and winter, following a fairly weak monsoon season last summer, but overall the drought picture is only slightly improved.

El Niño may help with late winter precipitation, but won't be able to break the drought. The moderate El Niño condition that has developed in the tropical Pacific Ocean is likely in its last 1-2 months before weakening to neutral levels. Above normal precipitation is expected in Arizona this spring, but with lingering above normal temperatures. It will be a good start towards recovering from the drought, but even so, the current moisture deficits are so severe that it will not end the drought.

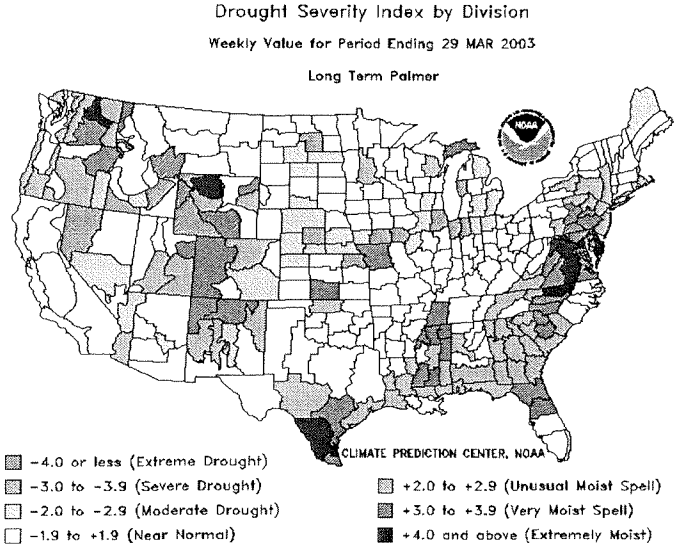
Very low reservoir levels remain as a result of several years of low winter rainfall and snow. Arizona experienced a large snow-pack over the last several weeks with dramatic increases over the same period last year. (Upper Salt River Basin from 31% last year to 92% now; Central Mogollon Rim from 28% to 99% now) Variable stream-flow levels are predicted for key streams in Arizona. In that regard, in the Verde River and Tonto Creek, the forecast calls for above median stream flow levels through May. All other major streams in key watersheds, however, can expect below median flows through springtime.

The wildland fire season could still be very severe again in 2003. The fire danger outlook for the coming months is predicted to be normal to above normal. 1000-hour fuel moistures dropped significantly through January reaching critical levels for the time of the year. However, as precipitation fell throughout the area during February and March, 1000-hour fuel moistures started showing signs of rebounding, bringing heavier fuel moisture levels back to within their normal range of 16-20 percent.

Bark beetles are causing severe economic damage and worsening the fire hazard. Another consequence of the drought is that well over 600,000 acres of Arizona's forests have become infested with bark beetles, a very destructive forest pest native to ponderosa pine and pinyon-juniper forests. Low tree vigor caused by several years of drought and excessively dense stands of trees have combined to allow beetle populations to reach outbreak levels, about a 7-fold increase in acreage since 2001. This insect pest not only causes severe economic damage due to destruction of timber, but the dead trees seriously increase the potential for wildland fires.



Two widely used drought measures, the U.S. Drought Monitor (above), and the Palmer Drought Severity Index (below), differ somewhat in the Arizona drought picture, but both of them show moderate to extreme drought conditions continuing throughout most of Arizona.



Palmer Drought Severity Index

The Palmer Drought Severity Index does not indicate as much of the state to be in severe or extreme drought as the US Drought Monitor does, but it nevertheless indicates a drought persisting in Arizona.
The Palmer Index was developed primarily for the Midwest and the eastern parts of the country, and does not necessarily give the most accurate assessment of Southwestern drought conditions.

In-State Reservoirs Very Low, Colorado River Reservoirs Continue Dropping

Arizona Reservoir Status — Early-April 2003

Colorado River Reservoirs	Storage (1000 acre-ft)	%Full	Year Ago
Lake Powell	12,444	51	70
Lake Mead	16,826	64	75
Total Colorado System	31,496	60	73
In-State Reservoirs			
Salt River	769	38	36
Verde River	199	69	22
Total Salt/Verde System	968	42	34
San Carlos Reservoir	42	5	8
Lake Pleasant *	630	74	(Approx.) 70

* (Lake Pleasant functions as a temporary storage and distribution facility for CAP water from the Colorado River. Its level is not indicative of the in-state watershed conditions.)

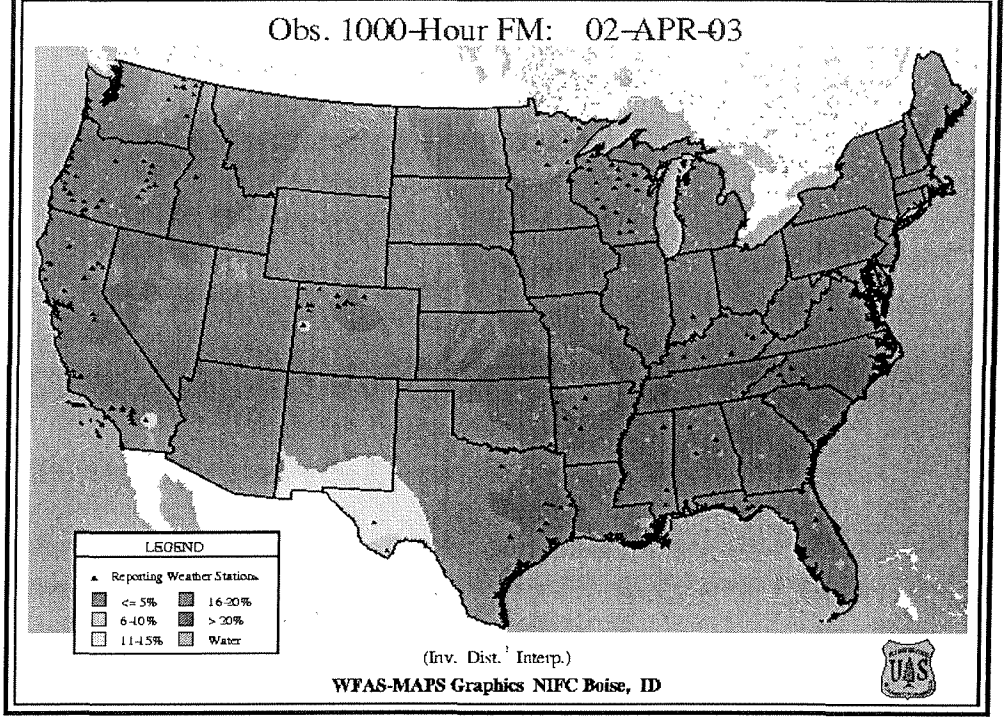
Reservoirs inside the state are in generally better shape than they were a year ago, yet the large reservoirs along the Colorado River have continued to drop relative to last year. As of the 1st of January, the Salt River Project has cut water allocations to all of its clients by one-third (from 3 acre-feet per acre to 2 acre-feet per acre), as a water conservation measure. This will make it necessary for clients to procure more water from other more costly sources, such as the Central Arizona Project.

SRP permitted to fill Lake Roosevelt.
SRP was working with the US Fish and Wildlife Service on a Habitat Conservation Plan (HCP) for the Southwestern Willow Flycatcher near Roosevelt Lake. The Fish and Wildlife Service have approved the HCP, and the reservoir system is currently at 38% capacity. However, it has recently been discovered that there are also flycatcher populations nesting near the shoreline of Horseshoe Reservoir, and a similar HPC must be approved for Horseshoe before that reservoir can be filled.

The NRCS Phoenix office reports the following: Good rainfall in the last half of February, and through March, helped to bring precipitation levels in key watersheds closer to average. In that regard, the Little Colorado and Verde River Basins along with the Central Mogollon Rim are now at 100% of average (precip.). Other watersheds including the Salt, San Francisco, and the Upper Gila River Basins also benefited from the winter moisture, but lag behind average at this time. Especially dry for the ranchers and farmers, are the areas in the proximity of Safford, Willcox, Sells, Douglas, and the Navajo Nation. All other parts of the State continue to report very dry conditions.

Wildland Fire Season May Be Severe in 2003. Larger size forest fuels condition will be critical factor for fire season.

1000-hour fuel moistures are expected to remain at near normal levels (i.e. 16-20 percent) through April. By late May and June, it is expected that fuel moisture will drop to near record low values, thus suggesting an increase of available fuels, and it is these fuels that have the potential to create very extreme "crown fires" that propagate from treetop to treetop, and are extremely destructive and dangerous.
The map shows the conditions of these fuels, referred to as "1000-hour" fuels, meaning that it takes them about 1000 hours (around 40 days or so) to change their moisture content significantly in response to changing weather conditions. These larger fuels are in marked contrast to the smaller "fine" fuels like grass, leaves, and pine needles, which can change their moisture content in a matter of only a few days or hours.



When the 1000-hour fuel moisture contents are down as low as 10-15%, the potential for very large fires becomes extreme. As the map shows, the moisture content of these larger fuels throughout much of the state is consistently 16-20%. This is a relatively normal condition for April. These fuels will dry out to very low levels by late spring or early summer.

The spring grass crop may be drying out earlier than normal, if the climate forecast for above normal temperatures for the spring through summer is correct. There is a very large amount of dead fuel in the brush fields at mid-elevations throughout the state. Severe drought-related mortality has produced these dead fuels, including manzanita, pinyon pine, and oaks. Bark beetle infestations have also contributed to large amounts of dead ponderosa pine. (See map on next page.)

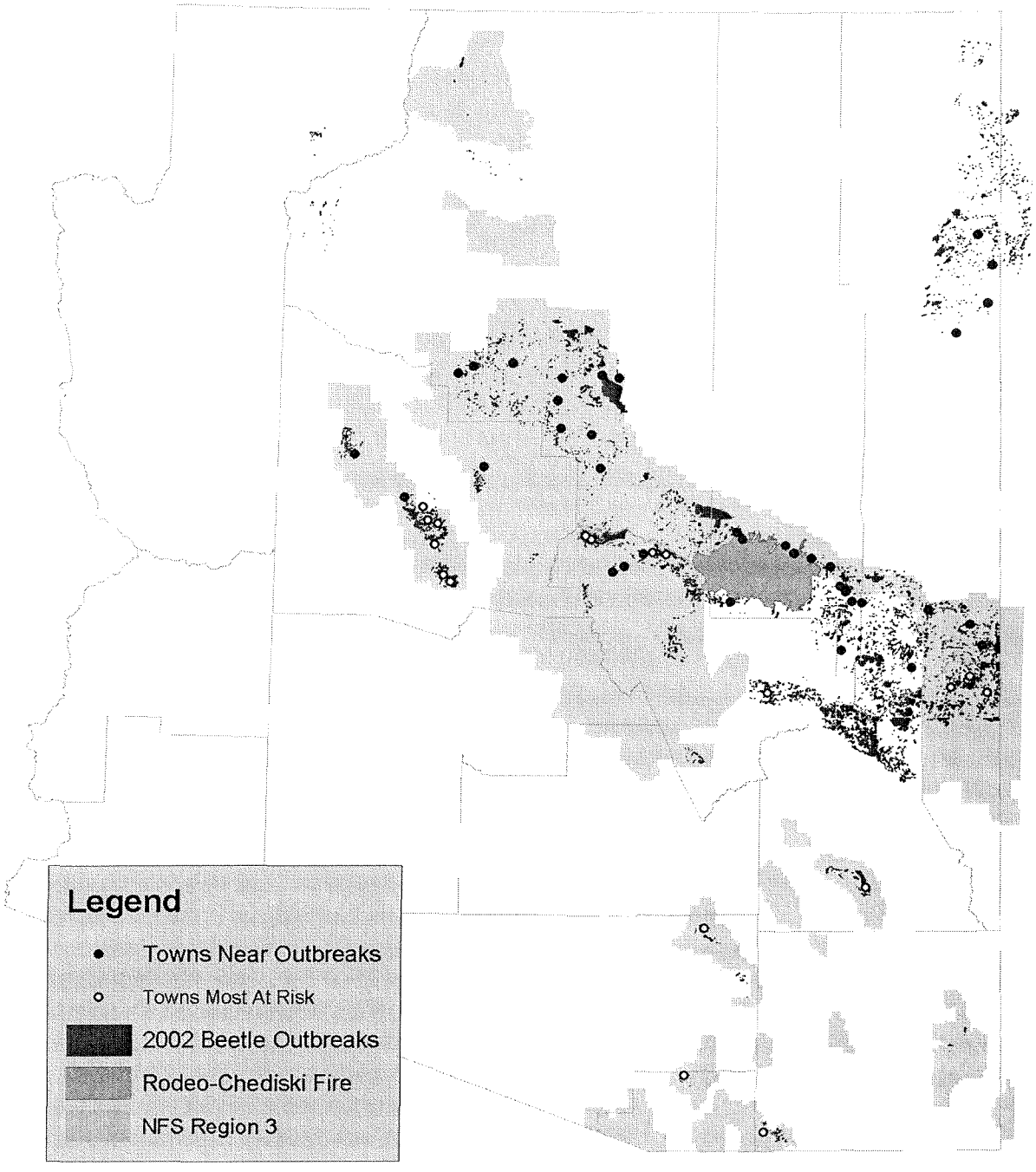
The most likely scenario for the spring/summer fire season in the Southwest Area features a continuation of normal to above normal temperatures and above normal precipitation early on becoming more normal later on. Fire danger is currently within normal range. The current situation coupled with the weather outlook should result in fire danger to be slightly above normal for elevations below 8500 feet by May. Large acreage fire potential will be above normal from late May through early July leading to extended attack. Mop-up will be much more critical due to the spotting potential and increased risk of escape.

The worst-case scenario entails a dramatic drop off in precipitation occurrence through the spring with a worsening of the drought conditions currently being experienced across the Southwest Area. This scenario assumes that no further significant precipitation occurs until the onset of the summer monsoon season. The result of this forecast coupled with current conditions will produce extreme fire danger conditions for up to 3 weeks during the month of June. Large acreage potential will be very high with fires that escape initial attack and quickly transition from surface fires to crown fires. Any escaped fires will be extremely resistant to control, more likely to transition to plume dominated and exhibit the potential for long range spotting.

As in 2002, the fire season this year has the potential to be extremely severe, with the potential for development of very dangerous conditions across the state. It may well take several years for the Arizona forests and woodlands to recover from the drought, even if we get adequate or even abundant rainfall, because trees that have been drought-stressed for several years are not as able to take advantage of rainfall when it does occur as well as they can when they have not been under prolonged drought stress.

Alex McCord, Situation Analysis, ADEM (602) 231-6211 mccorda@dem.state.az.us

Bark Beetle Outbreak
2002 Aerial Detection Survey



Scale = 1:2,980,427

Produced by ADEM
Contact: Matthew A. Parks, (602)392-7510
Data provided by National Forest Service, Region 3
Information as of September 2002

Annex: State Emergency Response Incident Action Plan

Arizona Drought Emergency 2003

State of Arizona Emergency Response Incident Action Plan

Operational Period:

04/08/2003 to 07/31/2003

Background
May 20, 2003

For the fourth year in a row, Arizona has experienced well below normal rainfall. Out of the last seven years, six have been below normal, some of them extremely dry. Watershed snowpack levels are very low, generally below 20% of normal, leading to a streamflow forecast of much below median for all of the streams and rivers in Arizona. This year the mainstem Colorado River is also forecast to provide only 50% of its normal inflow into Lake Powell. All the major reservoir levels in the state are below normal, including the largest reservoirs along the Colorado River.

The very dry conditions have increased the likelihood that there will be water supply problems in the smaller communities and a shortage of rangeland feeds for cattle and other livestock. The potential for a severe wildland fire season has also increased. No particular water supply problems are anticipated in the major metropolitan areas and the large farming districts because of the availability of water from the Salt River Project, Central Arizona Project, and well-developed groundwater systems.

Fire occurrence and fire behavior in the lower elevation perennial grasslands in the southeastern part of the state has been above normal this spring, an early indicator of a potentially very difficult fire season. Fire activity has not been particularly high in the rest of the state so far, primarily because the very dry winter conditions have not allowed any significant grass cover to develop, except in the southeast part of the state. Where fires have started in the northern part of the state, they have spread much more rapidly than they normally do this time of the year.

High temperatures and low precipitation amounts are likely to continue throughout the spring and early summer. The larger size classes of forest fuels (branches and downed logs) in the higher elevation timber and brush country are currently in a very dry condition, and are almost certain to remain dry even if some precipitation does develop. The smaller size fuels (twigs, leaves, grass and brush) will be drying out over the next few weeks, and as that develops it is anticipated that the fire conditions in the forests and woodlands will become very active until the monsoon season rainfall is well established, probably sometime around midsummer. Such dry springtime conditions do not necessarily lead to a severe fire season, but they do indicate that planning for a severe fire season is warranted.

Arizona Drought Emergency 2003

(Emergency Response)

Time Prepared: 1300 hours, May 20, 2003

Operational Period: April 8, 2003 through July 31, 2003

General Incident Objectives

1. In cases where public health is compromised by drought, provide the management structure and mechanisms to provide potable water for human consumption.

2. In cases where public health is compromised by drought, provide Governor's Emergency fund reimbursements to political subdivisions.

3. Facilitate requests for assistance from Arizona's Native American nations through the Federal Government.

4. Anticipate future operational needs such as potable water, wildland fire and agriculture. Plan logistical requirements to support these needs.

5. Produce situation reports. Use E-Team to note current and projected drought status and provide detailed operational status by county.

Attachments:

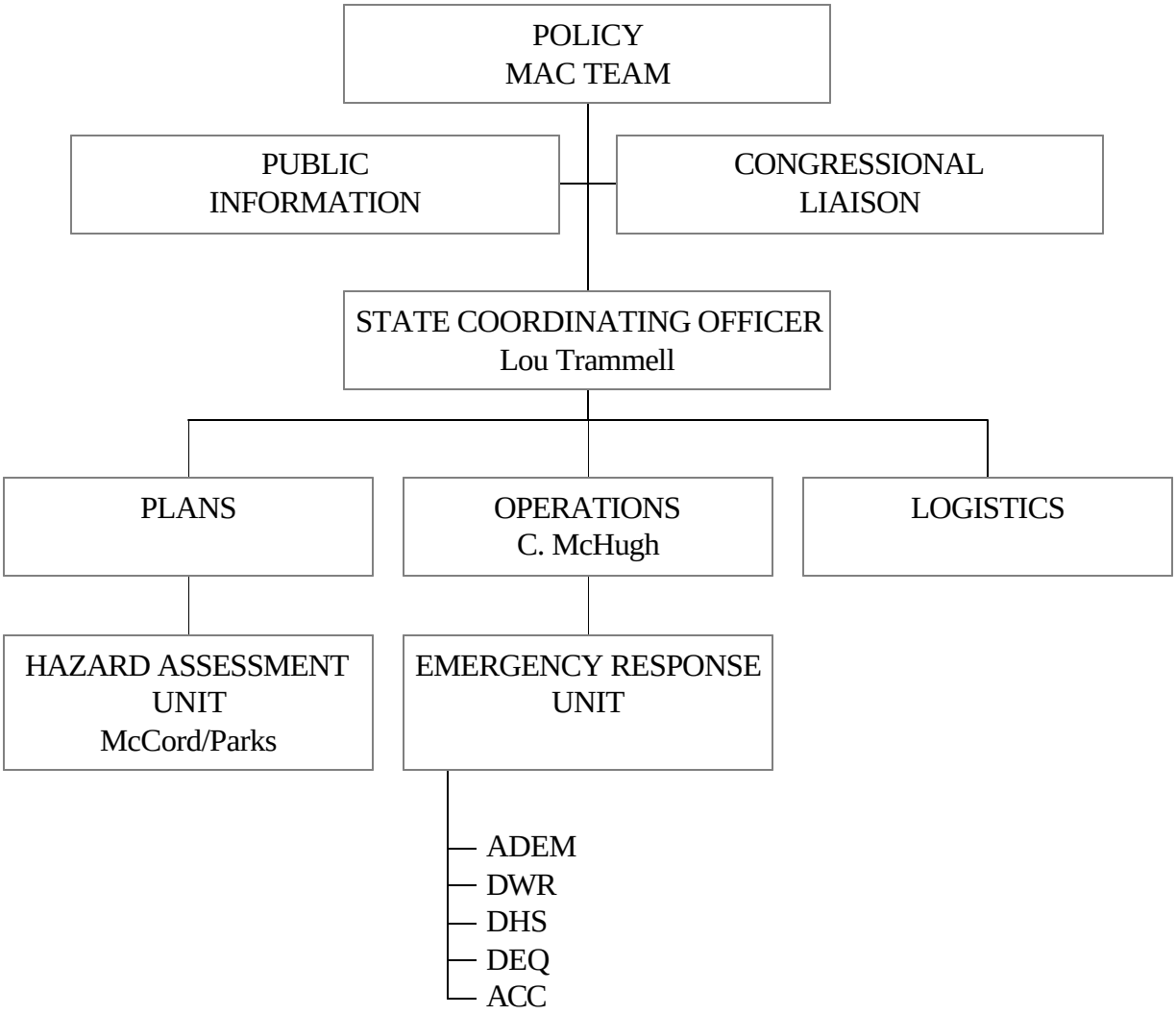
1. Organizational Chart

2. Description of SEOC Functional Groups

3. State Response Priorities

4. Assignment Lists (Agriculture, Potable Water, Wildlife Fire)

ARIZONA DROUGHT EMERGENCY 2003
Incident Management Team



Arizona Drought Emergency 2003

(Emergency Response)

Incident Management Functional Groups

Drought operations will continue as the situation dictates and at the direction of the Director, ADEM. Operations will be comprised of the following functional elements:

POLICY GROUP: This group is responsible for the strategic direction of state level emergency operations. Performs or supports the command function and may include representation from other state agencies or multiple jurisdictions. Mutual aid liaison is established here. Strategic direction is articulated from the Policy Group. Also known as the Multi Agency Coordination Team or MAC.

PUBLIC INFORMATION OFFICER: The Public Information Officer (PIO) is responsible for processing and disseminating emergency public information to the media.

PLANS GROUP: This group coordinates elements of information to provide the focus for analysis relative to the incident. This group is responsible for monitoring and reporting the current situation status, as well as projecting and planning for possible incident developments in the future. This group has the primary responsibility for the production of action plans and to work directly with other staff elements in order to coordinate operational requirements.

OPERATIONS GROUP: This group is responsible for state tactical command, coordination, and incident response assets. Tactical level liaison of mutual aid is accomplished by this group. The Operations Group monitors and assesses current operational conditions, short-falls, and unmet human needs. Depending on mission requirements, the Operations Group may include Public Safety, Fire/Rescue, Mass Care, and Public Works and Engineering Branches.

LOGISTICS GROUP: This group coordinates personnel, resources, communication augmentation, supplies, procurement, etc., required to support State agency response. The elements of the Logistics Group are: Information Management, Resource Support, Communications, SEOC Support, and Fiscal Services. Request for assets, whether internal or external, are validated and processed by this group. The Logistics Group handles the financial aspects of an emergency operation as well as maintaining the message center and documenting the need for/use of both human and material resources.

Arizona Drought Emergency 2003

(Emergency Response)

State Response Priorities

If state assets are required, their response will be coordinated between ADEM and the county emergency operations centers. Response priorities will be determined by the degree of threat to human life, the protection of property and maintenance of economic stability in Arizona. County emergency operations centers should consider the following before requesting state resources:

1. Have city, county, and mutual aid resources been exhausted?
2. What resource is the most appropriate for the mission?
   - Are other local and county assets available?
   - Which resource has the best response time?
   - What is the most cost/effective resource?
3. Given scarce resources, what is in the best interest of the state-wide mission?

Five Ws

Prior to the deployment of state resources, the following must be answered:

1. Who needs the resource?
   - Identify the point of contact and means of communication.
2. What is needed? What is the nature of the mission?
3. When is the resource required?
4. Where is the resource needed?
5. Why is this specific resource required? Are there other options?
   - Explain why this is the most appropriate resource for the mission.
6. How is the resource to be delivered?

Arizona Drought Emergency 2003

(Emergency Response)

Assignment List
Hazard Assessment Unit

McCord/Parks, ADEM

Operational Period: April 8, 2003 through July 31, 2003

SPECIAL INSTRUCTIONS:

1. Monitor the development of weather and climate conditions affecting the drought situation throughout the operational period.

2. Maintain liaison with appropriate state and federal agencies charged with collecting, analyzing, and disseminating information related to weather and water supply.

3. Analyze available information to assess the likelihood of intensification or lessening of drought conditions in Arizona, and on their potential impact on the state.

4. Provide periodic drought situation reports and provide spot situation reports when needed.

Prepared by:

Approved by:

Arizona Drought Emergency 2003
(Emergency Response)

Assignment List
Potable Water Emergency Response Unit

Operational Period: April 8, 2003 through July 31, 2003

SPECIAL INSTRUCTIONS:

1 Monitor community-level potable water status throughout the state.

2. Conduct periodic checks with county emergency managers to identify communities with potable water shortages.

3. Maintain a situation map noting current community status.

4. Prepare community status reports for addition to the drought situation report. Include:
   - Does the community expect to run out of potable water? If so, when?
   - What remedial actions are in progress?
   - Can the community/county acquire supplementary potable water?
   - Will state emergency assistance be required?

5. Provide preliminary technical support to counties and communities. Route communities to appropriate support organizations.

6. Coordinate water shortage recommendations with ACC, ADEQ, ADHS, ADWR.

7. In cases that qualify for state emergency assistance, the counties will identify and coordinate the delivery of potable water to affected communities through commercial water companies.

8. If commercial water providers become unavailable, AZ ARNG resources will be utilized as a last resort.

See Appendix A for further details of the Potable Water Emergency Response Operating Procedures.

Prepared by:

Approved by:

ADEM Initial Potable Water Assessment Checklist

(Name of Political Subdivision)

The Governor's Emergency Fund will not be used to provide water for livestock or irrigation of crops. The Fund may be used to provide potable water for human consumption. All applicable local, state and federal policies and laws must be followed. Prior to requesting state assistance, it is our recommendation that the following measures be taken as a minimum.

1.

Has public health been compromised ?	Yes / No
Has a public health emergency been declared ?	Yes / No
Which public health department declared the emergency ?	County / State
Date of declaration:	

2.

Have water rationing and other prudent conservation measures been implemented ?	Yes / No
Describe actions taken and date initiated. Provide examples of actions.	
Action:	Date:
Action:	Date:
Action:	Date:

3.

Do you have a water curtailment plan approved by the Corporation Commission ?	Yes / No
Date Approved:	

4.

What steps have been taken to restore normal water delivery methods ?	
Were permits required and obtained ?	Yes / No

5.

In what way has this event exceeded both county and local ability to respond ? (Please provide copy of budget.)
Financial:
Physical Resources:

6.

What is the anticipated duration of this potable water emergency ?

ADEM Initial Potable Water Assessment Checklist (Continued)

7. Is this a new problem, reoccurring problem or a seasonal problem ? Please describe.

8. What Mutual Aid alternatives have been explored and/or exhausted ?

   Who was contacted and when ?

9. Have you contacted any of the following State Agencies for assistance ?

Agency	Type of Assistance	Representative	Date Contacted	Assistance Provided
AZ Corporation Commission (ACC)				
AZ Dept. of Agriculture				
AZ Dept. of Environmental Quality (ADEQ)				
AZ Dept. of Health Services (ADHS)				
AZ Dept of Water Resources (ADWR)				
Other				

Signature:
Applicant Agent _____ Date: _____

Title: _____

ADEM/ADWR Use Only

ADWR Policy recommendation to the Governor _____

_____Date: _____

**** Please attach all documentation supporting the items listed above and provide copy of budget. ****

County Role

The county is responsible for:

1. Implementing the most cost/effective solution.
2. Managing the distribution of water (if required).
3. Contracting with commercial providers (if required).

Annex: Arizona Department of Health Services Drought Information Sheets

Drought Information Sheet:

Food Establishment Information for Drought-Induced Water Outages

Arizona Department of Health Services

Summer 2003

Can I keep my food establishment open when our water system has an outage?

Yes. In most circumstances you can still operate your food establishment if your water system has an outage. However, you will need to take some measures to ensure that the food remains safe.

What measures do I need to do to take to keep the food safe?

Basically, you will need to take the same measures that temporary food booths use to ensure food safety at special events:

- Have enough bottled water on-hand for your food handlers and eat-in customers to wash their hands.
- Have hand sanitizers available for use.
- Use gloves during food preparation.
- Use single-service disposable utensils, plates etc. for food service.
- Limit your food processing to simple menu items that don't require using utensils and pans that need to be cleaned.
- Have access to a portable toilet.

Do you have specific guidance that describes exactly what to do?

The Arizona Department of Health Services has a specific guidance document that describes how to safely operate your food establishment during a community water outage. The guidance is posted on our website at http://www.hs.state.az.us/phs/oeh/fses/index.htm

You can also get additional information from the Office of Environmental Health at 1.800.367.6412.

Drought Information Sheet:

School Management During Drought-Induced Community Water Outages

Arizona Department of Health Services

Summer 2003

Can I keep my school open when our water system has an outage?

Yes. In most circumstances you can still operate your school if your water system has an outage. However, you will need to take some measures to ensure that the children's environment remains healthy.

What measures do I need to do to take to keep the children healthy?

- You will need enough bottled water for the children and staff to drink. One liter of bottled water per person per day will be needed, more during hotter temperatures.
- If you use evaporative cooling an alternative source of climate control will be needed to avoid heat related illnesses. If no alternative is available, dismissing school should be considered.
- You will need to have some portable toilets available for the children and staff. Having one portable toilet for every 100 persons is usually adequate.
- Have hand sanitizers available for children, staff, and cafeteria workers.
- Have enough bottled water on-hand for your cafeteria workers to wash their hands.
- Use gloves during food preparation.
- Use single-service disposable utensils, plates etc. for food service.
- Limit your cafeteria food processing to simple menu items that don't require using utensils and pans that need to be cleaned.

Do you have specific guidance that describes exactly what to do?

The Arizona Department of Health Services has a specific guidance document that describes how to safely operate your school during a community water outage. The guidance is posted on our website at http://www.hs.state.az.us/phs/oeh/fses/index.htm

You can also get additional information from the Office of Environmental Health at 1.800.367.6412.

Drought Information Sheet:

Food Establishment Operation Guidelines During a Drought-Induced Water Outage

Arizona Department of Health Services

Summer 2003

Handwashing

Equipment

During a drought-induced water outage, a hand wash station is needed for employees and customers at all Food Establishments.

- A minimum of 5 gallons of warm water (95-105°F) in an insulated container with a spigot or spout (i.e. igloo® or cambro®).
- A container for the waste-water, which must be disposed of into an approved sewer or wastewater system.
- Hand soap and paper towels (sanitizers do not replace hand washing).
- A heating device such as a coffee machine, grill or hot plate.

Procedures

Hands and exposed portions of arms should be washed with soap and water. Vigorously rub hands and arms together for at least 20 seconds and thoroughly rinse with clean water. Employees should pay particular attention to the fingertips, the areas underneath the fingernails and between the fingers.

Handwashing Frequency

- Wash hands after touching your face or other parts of the body.
- Wash hands after using the portable toilet.
- Wash hands after coughing, sneezing, using a handkerchief or disposable tissue, using tobacco, eating or drinking.
- Wash hands when switching between working with raw food and working with ready-to-eat food or when engaging in activities that contaminate the hands.
- Hands should be washed at least once per hour.

Utensil & Equipment Washing

Food processing should be limited to simple menu items that don't require using utensils or pans that need to be cleaned. If utensils and equipment are used in food and beverage service, the utensils and equipment are required to be washed and sanitized. The proper sanitation requires the use of a four-step procedure.

- Three adequately sized containers should be set-up.
- The first container is used for washing and contains hot water and dish soap.
- The second container is used for rinsing and contains hot water.
- The third container is used for sanitizing with cool water and 50-100 parts per million (PPM) of chlorine bleach. Use one capful of bleach for every five gallons of water.
- You should have test strips available to test the level of chlorine in the water.
- After completing the three steps, all utensils and equipment must be air-dried.
- Change the water and replace the soap and bleach in the containers frequently to keep the process effective.

Food Safety

Food Source

- All food and beverages must be from an approved source.
- Food prepared in a private home may not be used, nor offered for human consumption in a Food Establishment during a water outage. Homemade food products cannot be used or provided to customers in the establishment.
- All packaged foods should be properly labelled.
- Food items should be limited to those that require limited preparation during a drought-induced water outage in a Food Establishment. Foods requiring extensive hand contact or multiple steps are discouraged.
- Ice that is consumed or contacts food should be from only in chipped, crushed, or cubed form. The ice should be stored in single-use food grade plastic bags, or wet-strength paper bags filled and sealed at the point of manufacture. It should be held in these bags until it is dispensed in a way that protects it from contamination.

Food Protection

- Gloves or utensils should be used to prevent bare hand contact with ready-to-eat foods such as breads, tortillas, chips, produce for juicing, and garnishes.
- Non-latex, single use gloves must be used. Utensils, wax paper or foil may be used as well. Remember to wash hands before putting on gloves. Change gloves when switching task or when gloves become dirty or worn. Gloves must be worn when employees have sores, burns, and/or bandages on their hands.
- All condiments should be dispensed from disposable squeeze bottles or individual packets.

Portable Toilets

In the event of a water outage, the food establishment must have access to portable toilets for employees and eat-in customers. Unless local regulations are more stringent, the food establishment should have access to:

- One portable toilet for the 1st 100 people and 1 portable toilet for each additional 100 people, or portion thereof.
- Portable toilets should be located within 200 feet of the food establishment.
- Collection, storage and treatment of sewage as required by the Arizona Department of Environmental Quality under 18 A.A.C. 8, Article 6 and 18 A.A.C. 9, Articles 7 and 8.

Length Of Operation During A Drought-Induced Water Outage

The food establishment cannot operate during a drought-induced water outage for more than 14 consecutive days unless state or local emergency procedures are in effect.

You can also get additional information from the Arizona Department of Health Services at 1.800.367.6412.

Annex: Drought Emergency Groundwater Transportation Permit Application

Arizona Department of Water Resources Water Management Division 500 N. 3rd Street Phoenix, Arizona 85004 (602) 417-2470 (800) 352-8488 www.water.az.gov	**Application to Transfer Water Between Groundwater Basins For Emergency Drought Relief**

Fill in each section completely and accurately. Please print using black ink. Please attach all required documentation to the end of this application form.

Date of Governor's Declaration of Emergency Due to Lack of Precipitation or Water Shortage:
_____

Section 1: Source of Groundwater to be Transferred between Groundwater Basins:

Well Registration Number_____ If more than one well will be utilized, provide well registration numbers for all additional wells_____
_____

Public Water Supply system identification number (if applicable)_____

Is the well from which the transported groundwater will be withdrawn located within the incorporated area of a city or town? ☐ Yes ☐ No
If the answer is yes, applicant must attach an original letter from the city or town on that entity's letterhead stating that the city or town approves of the withdrawal of groundwater from the well(s).

Specify the city or town from which groundwater is to be transported_____

Is the well from which the transported groundwater will be withdrawn located within the boundaries of a political subdivision, established pursuant to A.R.S. Tile 48, Chapter 17 or 19 (e.g., an irrigation district agricultural improvement district, or water conservation district)? ☐ Yes ☐ No
If the answer is yes, applicant must attach an original letter from the political subdivision on that entity's letterhead stating that the political subdivision approves of the withdrawal of groundwater from the well(s).

Specify the political subdivision(s) from which groundwater is to be transported_____
_____

Is the well from which the transported groundwater will be withdrawn located within one county and the water will be transported to another county? ☐ Yes ☐ No
If the answer is yes, applicant must attach an original letter from the county from which the water will be transported on that county's letterhead stating that the county approves of the withdrawal of groundwater from the well(s).

Specify the county from which groundwater will be transported_____

Specify the county to receive the groundwater_____

Specify the method by which the groundwater will be transported_____

Section 2: Location and Use of Groundwater Transported Between Basins

Specify the uses to which the groundwater transported from the above location will be put:

Domestic water supply ☐ Municipal water supply ☐ Stockwater ☐

If the transported groundwater is planned to be used for domestic water supply for single residences, specify the locations of each residence to be so supplied. Use continuation sheets for additional residences. List the name, address, and telephone number of the landowner, as well as the county tax assessor's parcel identification number for each residence and the residence address if different than the landowner's address.

LANDOWNER	CONTACT PERSON LIVING AT RESIDENCE
ADDRESS	RESIDENCE ADDRESS
CITY, STATE, ZIP CODE	CITY, STATE, ZIP CODE
TELEPHONE	COUNTY TAX ASSESSOR'S BOOK, MAP, PARCEL NUMBER

If transported groundwater is to be used for municipal water supply, specify the name of the water provider, the public water supply identification number, address, telephone, and a contact person

WATER PROVIDER NAME	CONTACT PERSON
ADDRESS	TELEPHONE
CITY, STATE, ZIP CODE	PWS ID#

If transported groundwater is to be used for stockwatering, specify the legal description and ownership of the land where the water is to be used.

TOWNSHIP	RANGE	SECTION	160 ACRE QUARTER	40 ACRE QUARTER	10 ACRE QUARTER
LANDOWNER NAME AND ADDRESS					
CONTACT PERSON (IF DIFFERENT FROM LANDOWNER) AND TELEPHONE NUMBER					

Is the area to which groundwater is to be withdrawn or transported located within an Active Management Area? Yes ☐ No ☐

Does the county, city, town, or other political subdivision within which the transported water is to be used have in place an emergency conservation plan sufficient to prevent nonessential use of the groundwater? Yes ☐ No ☐

Applicant must attach a copy of the conservation plan.

CERTIFICATION

As the responsible party, I certify that the Governor of Arizona has declared an emergency due to drought, lack of precipitation, or water shortage in my area, and that an emergency need exists to transport groundwater for interim water supplies for humans and/or stockwatering. I further certify that written consent has been obtained from all relevant parties, and that a water conservation plan is in effect for my area. I further certify that the transported groundwater shall not be utilized to subsidize or augment insufficient water supplies resulting from continued growth or deficient base water supplies for the area. I further certify that transportation of the groundwater shall cease upon expiration of the permit period or upon notification that the Director has determined that the transportation of groundwater is no longer necessary, whichever comes first, unless the permit is renewed.

I certify that all the information in the above application is true, complete and correct to the best of my knowledge.

SIGNATURE _____ **DATE** _____

DROUGHT EMERGENCY GROUNDWATER TRANSPORTATION PERMIT APPLICATION PROCESS

House Bill 2478 allows transportation (hauling) of groundwater between groundwater basins outside of Active Management Areas (AMAs) in the event of a drought emergency resulting in a water shortage. This new law became effective on May 21, 2003, and will remain in effect until April 30, 2004. Several conditions must occur before the transportation of groundwater between basins (which is normally not allowed under statute) can occur. Most importantly, the Governor of Arizona must first declare an emergency due to lack of precipitation or a water shortage pursuant to Arizona Revised Statutes (A.R.S.) § 35-192.

The other requirements that must be met are outlined on the attached application form. Briefly summarized, the applicant must identify the source of groundwater. Then the applicant must identify where the groundwater to be transported will be used, as well as the specific uses to which the water will be put. Transportation of groundwater between groundwater basins in a drought emergency is only allowed to supply people (single residences or water providers) or animals such as livestock. Transportation of groundwater between basins is never allowed to shore up insufficient supplies resulting from continued growth or base supplies that were deficient to begin with. Pipeline transportation is not allowed; only motor vehicles or trains can haul the water.

Before withdrawing the groundwater from a basin for transportation, the applicant must identify the well(s) to be pumped. The well(s) must be in existence on the date of the Governor's declaration of an emergency. If the well(s) are located within the incorporated boundaries of a city or town or within the boundaries of a political subdivision established pursuant to A.R.S. title 48, chapters 17 and 19 (which deal with agricultural improvement districts and irrigation and water conservation districts), the applicant must demonstrate that permission to pump and transport the groundwater h as been obtained from that entity. If the groundwater will be withdrawn in one county and transported to another county, the applicant must demonstrate that the county from which the groundwater will be withdrawn has consented. Authorization letters from each entity on that entity's letterhead and signed by the responsible official (such as the chairman of the board or the mayor) must be attached to the application.

Groundwater transported for drought emergency relief purposes can only be used for domestic, stockwater, or potable municipal supplies (private water providers are included in this last category if they have a Public Water System identification number). For each category, the land or provider receiving the transported groundwater must be identified. Groundwater cannot be transported from or into an AMA. The county, city, town or other political subdivision (agricultural improvement district, irrigation district, or water conservation district) in which the transported groundwater will be used must have already implemented an emergency conservation plan sufficient to prevent nonessential use of groundwater. A copy of the plan must be attached to the application. Finally, a responsible person of the organization requesting the permit must sign the application.

The Department will review the application and supporting documentation, and make a decision to approve or deny the application within 30 days from its receipt by the Department. There is no fee for this application. The Department will mail the permit to the responsible person at the organization named on the application. A permit is valid for six months, but may be terminated earlier if the Director determines that the transportation of groundwater is no longer necessary. The applicant may reapply for a six-month extension of the permit if the drought emergency persists beyond the permit period. The transportation of groundwater must stop upon the cessation of the drought emergency or the end of the permit period. Records of the amounts of water transported should be maintained. Groundwater transported away from a groundwater basin pursuant to a permit is subject to payment of damages.